Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: **Dan & Laura Boyce**
PO Box 66
Winifred, MT 59489-0066

2. Type of action: **Application for Beneficial Water Use Permit No. 41S 30114604**

3. Water source name: **Groundwater (Kootenai Formation)**

4. Location affected by project: **The project is in Fergus County, about 13.2 miles Southwest of the town of Winifred, Montana.**

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

Applicants propose to divert groundwater from the Kootenai Aquifer, by means of two wells (well depths are 3,041 feet deep and 2,880 feet deep), from January 1 through December 31, at a combined flow rate of 150 gallons per minute (GPM) and a volume up to 207.7 acre-feet (AF). The wells are located in the NESENE Section 14, T20N, R16E, and SENESW Section 14, T20N, R16E, respectively. The purposes of use include Irrigation of 100.5 acres; Multiple Domestic for four households; Lawn and Garden irrigation for the four households (6 acres total); and Stockwater (19 stock tanks serving 623 animal units). The places of use encompass Sections 1, 11, 13 and 14, T 20N, R16E, and Sections 25 and 35, T21N, R16E, all in Fergus County. Water for irrigation purposes will be stored in a pit with a capacity of 77.7 AF, located in the N2S2 Section 14, T20N, R16E.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Dept. of Environmental Quality Website – Clean Water Act Information Center
MT. National Heritage Program Website - Species of Concern
USDI Fish & Wildlife Service Website - Endangered and Threatened Species
MT State Historic Preservation Office - Archeological/Historical Sites
USDA Natural Resources Conservation Service – Web Soil Survey
USDI Fish & Wildlife Service – Wetlands Online Mapper

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: **No Significant Impact.**

The source of supply for this application is groundwater; therefore, it has not been identified as a chronically or periodically dewatered stream by DFWP. The project should not have a significant impact on water quantity; the wells are pulling water from a confined aquifer approximately 3000 feet deep and are both flowing at the ground surface.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: **No Significant Impact.**

The proposed project would pull groundwater from the Kootenai Formation and there is a low likelihood of adverse impacts to water quality.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: **No Significant Impact.**

This proposed groundwater appropriation is from the Kootenai Aquifer at a flow rate of 150 GPM and volume of 207.7 AF per year. The Judith and Missouri Rivers are both considered hydraulically connected to the Kootenai Aquifer on a regional scale and groundwater depletions from these wells could eventually affect flows in the lower reaches of the Judith and down gradient areas on the Missouri. The Departments' physical availability vs. legal demands analysis shows water is legally available in all months requested for appropriation. See Technical Report and Preliminary Determination in permit file for more information. No significant impacts to groundwater quantity or quality are anticipated because of this project.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: **No Significant Impact.**

Water will be appropriated by two groundwater wells completed into the Kootenai Aquifer at depths of about 3000 feet. Water from the wells will be pumped at a combined flow rate of 150 GPM. Domestic, lawn & garden, and stock water will be pumped directly from the wells, while irrigation water will be stored in a reservoir which has a capacity of 77.7 AF.

A separate pumping system will be used to divert water from the reservoir to irrigate. The diversion works involves two relatively deep wells and is not expected to have a significant impact to stream channel flows, barriers, riparian zones, dams or other wells.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: **No Significant Impact.**

The Montana National Heritage Program website lists three animal species as Species of Concern within Township 20 North Range 16 East. Common names for these species are the Hoary Bat, Little Brown Myotis, and the Northern Redbelly Dace. The Montana National Heritage Program website also lists three animal species as Species of Concern within Township 21 North Range 16 East. Common names for these species are the Little Brown Myotis, the Blue Sucker and the Sauger. No plant species are listed for either township and range.

The USDI Fish & Wildlife Service Website shows that Fergus County has three species listed as either a candidate, threatened, or endangered for the Endangered Species Act; the Pallid sturgeon, (Endangered), the Canada Lynx (Threatened) and the Whitebark Pine (Candidate). This project is not expected to impact any species listed above as the project will be located on acreage that has been previously disturbed by past grazing or dryland irrigation practices. A letter from the Montana Sage Grouse Habitat Conservation Program concerning this project says that the change is located in the General Habitat area, is not within two miles of active sage-grouse lek and is consistent with the conservation strategy.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: **No Significant Impact.**

The National Wetlands Inventory website shows a Freshwater Emergent Type Wetland along a limited riparian reach of the Applicant's property, but does not show any functioning wetland areas or ponds at any of the proposed place of use locations. Wetlands should not be significantly impacted as a result of this project.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: **No Significant Impact.**

This project will include a 77.7 AF groundwater pond that will be seasonally utilized for irrigation. No adverse impacts to wildlife, waterfowl, or fisheries is anticipated.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: **No Significant Impact.**

The predominant soil as shown by the USDA Web Soil Survey is the Gerber clay loam. This soil is well-drained and has low salinity, there is a low likelihood of adverse impact to soil quality, stability, or moisture content.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: **No Significant Impact.**

Construction associated to this project may cause some disturbance to vegetative cover, however it is expected to be short-term. Normal weed management can be used to control noxious weeds potentially invading disturbed areas due to construction activities; therefore, no spread of noxious weeds should be associated with this application. It is the responsibility of the property owner to control noxious weeds on their property.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: **No Significant Impact.**

No impacts to air quality or adverse effects to vegetation from pollutants are expected as a result of this proposal, the wells are flowing and the irrigation system will use an electric pump.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: **N/A – no places of use are located on State or Federal Lands.**

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: **No Significant Impact.**

No additional impacts are anticipated.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: **No Significant Impact.**

No locally adopted environmental plans or goals have been identified.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: **No Significant Impact.**

The proposed action is consistent with typical agricultural practices in the area.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: **No Significant Impact.**

No impacts to human health have been identified.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: **No known impacts.**

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? **None**

(*b) Local and state tax base and tax revenues?* **Irrigation and new homes.**

(c) Existing land uses? **Irrigated crop land.**

(*d) Quantity and distribution of employment?* **None**

(e) Distribution and density of population and housing? **Potential for 3 new homes.**

(f) Demands for government services? **None**

(g) *Industrial and commercial activity?* **None**

(h) *Utilities?* **Electrical consumption from pivot irrigation.**

(i) *Transportation?* **None**

(j) *Safety?* **None**

(k) *Other appropriate social and economic circumstances?* **None**

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts:

Secondary impacts from this project are expected to be minor; there will be year-round groundwater depletions to the Kootenai aquifer, and in turn the lower Judith and Missouri Rivers. The Departments' water availability analysis indicates there is water legally available for appropriation in the reach of the Judith River below its confluence with Wolf Creek, the reach anticipated to be affected by this groundwater project.

Cumulative Impacts:

As more development takes place in the Judith Basin, there will be increased demands of water for domestic, irrigation, stock, recreation and other uses. This increased demand will eventually have a higher potential for significant impacts to existing water users.

3. *Describe any mitigation/stipulation measures:*

No mitigation or stipulation measures have been identified.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

No action alternative: Deny the application. This alternative would result in no change to the existing water rights for irrigation.

PART III. Conclusion

1. Preferred Alternative

The preferred alternative is the proposed alternative.

2 Comments and Responses

None Received.

3. ***Finding:***

*Yes___ No_**X**__ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

Name of person(s) responsible for preparation of EA:

Name: Douglas D. Mann
Title: Hydrologist – LRO
Date: 7/2/2018